

# IQVCXO-161

ISSUE 6; 23 AUGUST 1998

## Delivery Options

- Please contact our sales office for current leadtimes

## Output Compatibility

- HCMOS/TTL
- Drive Capability: 15pF/10TTL

## Package Outline

- 14 pin DIL compatible resistance welded enclosure, hermetically sealed with glass to metal seals

## Standard Frequency Stabilities

- $\pm 25\text{ppm}$ ,  $\pm 50\text{ppm}$  @  $V_c = 2.5\text{V}$   
(inclusive of supply voltage & output load variations over the operating temperature range)

## Operating Temperature Ranges

- 0 to 70°C
- -20 to 70°C
- -40 to 85°C (available 30.0 to 90.0MHz only)

## Storage Temperature Range

- -40 to 85°C

## Environmental Specification

- Terminal Strength: 0.91kg max. Force perpendicular to top & bottom
- Hermetic Seal: not to exceed  $1 \times 10^{-8}$  mBar litres of Helium leakage
- Solderability: MIL-STD-202E, Method 208C
- Vibration: 10 to 55Hz 0.76mm displacement, sweep 60 seconds, duration 2 hours
- Rapid Change of Temperature over Operating Temperature Range: 10 cycles
- Shock:  $981\text{m/s}^2$  for 6ms, three shocks in each direction along the three mutually perpendicular planes

## Output Frequency Change

- $\pm 100\text{ppm}$  min

## Voltage Control Pin 1

- $2.5\text{V} \pm 2.0\text{V}$

## Modulation Bandwidth

- $>15\text{kHz}$

## Marking

- Model number
- Frequency Stability Code
- Frequency Tolerance Code (Optional)

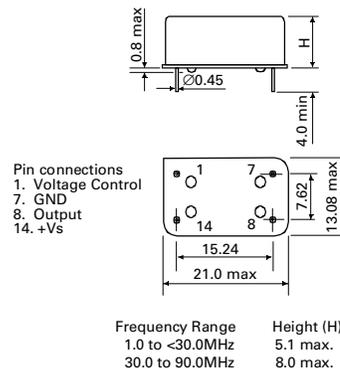
- Frequency

- Date Code (Year/Week)

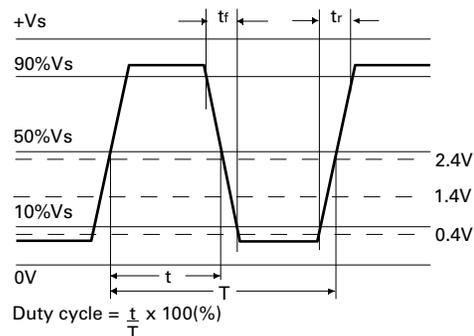
## Minimum Order Information Required

- Frequency + Model Number + Operating Temperature + Frequency Stability

## Outline in mm



## Output Waveform - HCMOS/TTL



**Electrical Specifications - maximum limiting values when measured in HCMOS test circuit.**

Frequency Range	Frequency Stability	Supply Voltage	Output Frequency Change	Supply Current	Rise Time( $t_r$ )	Fall Time( $t_f$ )	Duty Cycle	Model Number
1.0 to < 24.0MHz	$\pm 25\text{ppm}$ $\pm 50\text{ppm}$	$5V \pm 0.25V$	$\pm 100\text{ppm}$	15mA	10ns	10ns	40/60%	IQVCXO-161
24.0 to < 30.0MHz	$\pm 25\text{ppm}$ $\pm 50\text{ppm}$	$5V \pm 0.25V$	$\pm 100\text{ppm}$	40mA	10ns	10ns	40/60%	IQVCXO-161
30.0 to 90.0MHz	$\pm 25\text{ppm}$ $\pm 50\text{ppm}$	$5V \pm 0.25V$	$\pm 100\text{ppm}$	30mA	5ns	5ns	40/60%	IQVCXO-161

**Ordering Example**

Frequency \_\_\_\_\_ 22.0MHz

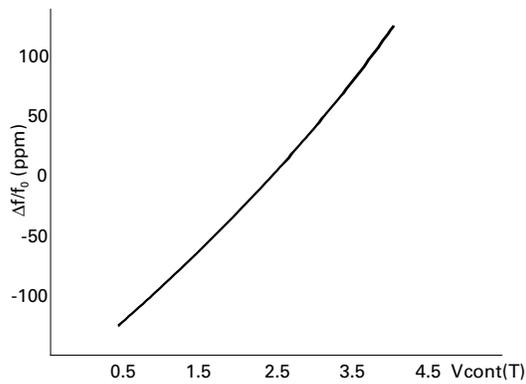
Model number \_\_\_\_\_ IQVCXO-161

Operating Temperature Code: \*X = -40 to 85°C, S = -20 to 70°C, Not applicable for 0 to 70°C \_\_\_\_\_ S

Frequency Stability: A =  $\pm 25\text{ppm}$ , B =  $\pm 50\text{ppm}$  \_\_\_\_\_ B

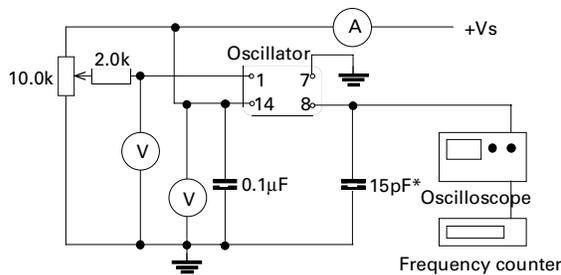
\*Please note: Available 30.0 to 90.0MHz only

**Typical Voltage Control Curve @ 25°C & 20.0MHz**



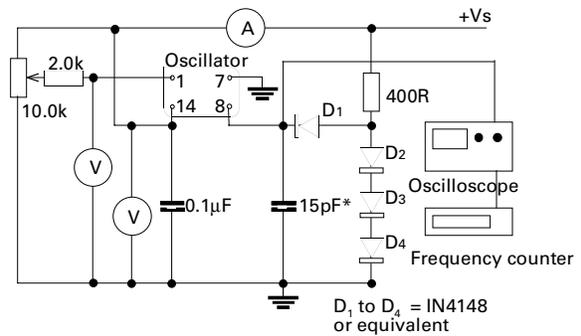
LEADED VCXOs

**Test Circuit - HCMOS**



\*Inclusive of jigging & equipment capacitance

**Test Circuit - TTL**



\*Inclusive of jigging & equipment capacitance

D<sub>1</sub> to D<sub>4</sub> = IN4148 or equivalent